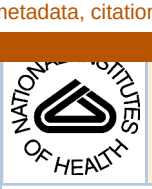

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Latino Adults' Access to Mental Health Care:

A Review of Epidemiological Studies

Leopoldo J. Cabassa[1,3], **Luis H. Zayas**[2], and **Marissa C. Hansen**[1]

1*School of Social Work, University of Southern California, Los Angeles, CA, USA*

2*George Warren Brown School of Social Work, Washington University in St. Louis, St. Louis, MO, USA*

Abstract

Since the early 1980s, epidemiological studies using state-of-the-art methodologies have documented the unmet mental health needs of Latinos adults in the U.S. and Puerto Rico. This paper reviews 16 articles based on seven epidemiological studies, examines studies methodologies, and summarizes findings about how Latino adults access mental health services. Studies consistently report that, compared to non-Latino Whites, Latinos underutilize mental health services, are less likely to receive guideline congruent care, and rely more often on primary care for services. Structural, economic, psychiatric, and cultural factors influence Latinos' service access. In spite of the valuable information these studies provide, methodological limitations (e.g., reliance on cross-sectional designs, scarcity of mixed Latino group samples) constrict knowledge about Latinos access to mental health services. Areas for future research and development needed to improve Latinos' access and quality of mental health care are discussed.

Keywords

Latino; Hispanic; mental health services; service access; literature review

Latino adults in need of mental health care are less likely than non-Latino Whites to access mental health services, and when they do receive care, it is more likely to be poor in quality (Institute of Medicine [IOM], 2003a; United States Department of Health and Human Services [USDHHS], 2001). As a result of these disparities in care, The President's New Freedom Commission on Mental Health (2003) concluded that Latinos and other racial and ethnic minorities experience a disproportionate burden of disability associated with mental disorders. Epidemiological evidence shows that Latino adults' rates of psychiatric disorders, on average, are similar to those of non-Latino Whites, yet increases with time spent in the U.S. (Burnam, Hough, Karno, Escobar, & Telles, 1987; Kessler et al., 1994; Ortega, Rosenheck, Alegría, & Desai, 2000; Robbins & Regier, 1991; Vega, Alderete, Kolody, & Aguilar-Gaxiola, 1998). This trend suggests that in the future Latinos' needs and demands for mental health services will increase as the population grows (Minsky, Vega, Miskimen, Gara, & Escobar, 2003; Vega & López, 2001). Without efforts to understand how Latinos cope with mental disorders, what factors influence their access to mental health services, and how to deliver high quality mental health care to them, Latinos will continue to suffer disproportionately from unmet mental health needs (USDHHS, 2001; Vega & López, 2001).

[3]Correspondence should be directed to Leopoldo J. Cabassa, PhD, School of Social Work, University of Southern California, 669 West 34th Street, Los Angeles, CA 90089-0411, USA; e-mail: cabassa@usc.edu.

Since the 1980s, a wave of epidemiological studies has described the mental health needs and access to mental health care among different segments of the Latino population in the United States and Puerto Rico. In this wave, studies, such as the Epidemiological Catchment Area (ECA) Study (Robins & Regier, 1991), the National Comorbidity Study (NCS; Kessler et al., 1994), and the Mexican American Prevalence and Service Survey (MAPSS; Vega, Kolody, Aguilar-Gaxiola, & Catalano, 1999) among others, have used state-of-the-art methodologies (e.g., structured diagnostic interviews, probability community samples) to document disparities in mental health care among Latino adults living in the community. Findings from these influential studies have served as a major platform to inform future directions of mental health services, policy, and research. The aim of this paper is to systematically review the methodologies and findings from these important epidemiological studies in order to add to the agenda for future research and service development.

Past reviews of the Latino mental health services literature have been instrumental in directing research and practice with Latinos (e.g., López, 2002; Mezzich, Ruiz, & Muñoz, 1999; Rosados & Elias, 1993; Ruiz 1993; Woodward et al., 1992; Vega & López, 2001). However, a salient limitation of these reviews is that they have not been systematic and have seldom specified the criteria used to choose and evaluate studies. More recently, the Surgeon General's Report, *Mental Health: Culture, Race and Ethnicity* (2001), reviewed some of the service use findings from epidemiological studies in the Latino community under the heading of community studies, but did not report the evaluation of these studies' methodologies. In this paper, we expand on these literature reviews by examining the findings from this wave of studies and evaluating studies' theoretical foundations, methodologies, and designs. To contribute to advancing mental health services research and practice with Latinos, this review examines the state of the evidence, identifies gaps in knowledge, and proposes future research agendas that can influence practice, policy, and research to improve access and quality of mental health care for Latinos.

METHOD

Selection of Studies

Electronic bibliographic databases (i.e., PsycINFO, Social Science Abstracts, and Medline) and manual searches were used to identify key epidemiological studies and relevant publications for this review. Key words used to conduct this search included, Latinos, Hispanics, Mexicans/Mexican Americans, Cubans, Puerto Ricans, access, mental health care, service use, utilization, and ethnic disparities. Additionally, other publications were identified by reviewing the reference sections of articles found.

Articles were chosen for review if they met several criteria: (1) included random samples of community dwelling Latino adults 18 years of age or older (2) employed standardized diagnostic instruments (e.g., Diagnostic Interview Schedule [DIS], Robins et al., 1981; Composite International Diagnostic Instrument [CIDI], Robins et al., 1988), and (3) reported access findings, such as rates, frequencies, and/or types of services used, for mental health problems. Since our focus was only on epidemiological studies examining how Latino adults residing in the community accessed mental health services, we excluded studies that used client data and/or clinical samples from particular mental health service agencies or systems of care (e.g., Barrio, Yamada, Hough, Hawthorne, Garcia, & Jeste, 2003; O'Sullivan, Peterson, Cox, & Kirkeby, 1989; Snowden, Hu, & Jerrel, 1995; Takeuchi, Sue, & Yeh, 1995).

Analytic Strategy

The following analytic strategy was used to guide this literature review. Articles meeting inclusionary criteria were reviewed and abstracted by two independent reviewers (first and

third author). Independently, the two reviewers abstracted from each article their sample size and sampling strategy, theoretical model or framework, mental health needs variables, and multivariate findings regarding factors associated with Latinos' use of mental health services. The examination of these four areas enabled us to identify similarities and differences between studies and patterns in methods and findings across studies. Reviewers then met to compare and discuss their respective abstractions and reach consensus in instances where differences were evident.

RESULTS

Sixteen articles covering seven major studies were included in this review. The articles present findings from the seven epidemiological studies: the ECA (Hough et al., 1987; Wells, Hough, Golding, Burnam, & Karno, 1987; Wells, Hough, Golding, Burnam, & Karno, 1989), NCS (Alegría et al., 2002), MAPSS (Peifer, Hu, & Vega, 2000; Vega, Kolody, & Aguilar-Gaxiola, 2001; Vega et al., 1999), the Puerto Rico Mental Health Utilization Study (PRMHUS; Albizu-Garcia, Alegría, Freeman, & Vera, 2001; Alegría et al., 1991; Ortega & Alegría, 2002; Pescosolido, Wright, Alegría, & Vera, 1998; Vera, Alegría, Freeman, Robles, Pescosolido, & Pena, 1998), South Florida Refugee Study (Portes et al., 1992), National Surveys on Drug Use and Health (NSDUH; Harris et al., 2005), and the Robert Wood Johnson Foundation's Healthcare for Communities Study (RWJF HCS; Wells et al., 2001; Young, Klap, Sherbourne, & Wells, 2001). The 16 publications are summarized in Table 1.

Samples

The probability samples used in the sixteen articles were drawn from either national random samples or samples from specific communities. National random samples from the U.S. included those used in the NCS, NSDUH, and RWJ HCS. Furthermore, the PRMHUS, drew an island wide probability sample of individuals living in poor socioeconomic areas of Puerto Rico.

Samples unique to specific communities included those of the ECA Los Angeles site, the MAPSS from Fresno County, California, and the South Florida Refugee Study composed of Caribbean refugees (i.e., Mariel Cubans and Haitians) from South Florida. These studies examined access to mental health care among specific Latino groups.

Study Designs

Fourteen of the 16 articles reviewed used cross-sectional designs and fifteen used multivariate statistical models (e.g., logistic regression) to evaluate how correlates of service use (e.g., demographic factors, health insurance, income, psychiatric diagnosis) were associated with Latinos' access to mental health services. Only two articles presented longitudinal designs both from the PRMHUS study. Albizu-Garcia and colleagues (2001) used wave 1 data (1992-1993) to predict mental health service use in wave 2 (1993-1994). Similarly, Ortega and Alegría (2002) examined changes in self-reliant attitudes from wave 1 to wave 2 data and its relationship with mental health service use in wave 2.

Seven (Alegría et al., 2002; Harris et al., 2005; Hough et al., 1987; Portes et al., 1992; Wells et al., 1987; Wells et al., 2001; Young et al., 2001) articles compared service use rates of Latinos with other racial and/or ethnic groups. For instance, Alegría et al. (2002) used NCS data to compare the use of outpatient mental health services between Latinos (i.e., Mexican Americans, Cubans, Puerto Ricans and other Latinos), non-Latino Whites, and African Americans in a national representative sample of the non-institutionalized U.S. population. All of these articles, except Hough et al. (1987), used multivariate analyses (e.g., logistic

regressions) to examine if ethnic and/or racial difference in service use rates persisted after controlling for correlates of service use.

Nine articles examined within group differences among a single Latino group. Albizu-Garcia et al. (2001), Alegría et al. (1991), Ortega and Alegría, (2002), Pescosolido et al. (1998), and Vera et al. (1998) used PRMHUS data to examine the mental health service use of Puerto Ricans living in low socioeconomic areas of Puerto Rico. Peifer et al. (2000), Vega et al. (1999), and Vega et al. (2001) used MAPSS data to examine the mental health service use of Mexican Americans in Fresno County, California. Wells et al. (1989) used data from the ECA Los Angeles site to study how acculturation influenced Mexican Americans service use.

Theoretical Models or Frameworks

Eight articles did not specify a theoretical model or framework to guide research questions and/or data analysis (Alegría et al., 1991; Harris et al., 2005; Hough et al., 1987; Peifer et al., 2000; Vega et al., 1999; Wells et al., 1987, 2001; Young et al., 2001). All of these articles were descriptive in nature reporting service use rates and examining factors associated with accessing mental health care.

The other eight articles (Albizu-Garcia et al., 2001; Alegria et al., 2002; Ortega & Alegría, 2002; Pescosolido et al., 1998; Portes et al., 1992; Vega et al., 2001; Vera et al., 1998; Wells et al., 1989) specified a service use model or framework. Andersen's (1995) Behavioral Model of Health Service Use was the most commonly used, appearing in seven reports. The basic formulation of this model is that service use is dependent on predisposing, enabling, and need factors. Its strengths for epidemiological service use studies is that it organizes and enables the examination of broad structural, individual, and environmental factors theorized to influence service use. The structure of this model also provides a versatile analytical framework for examining the relationship between predictor (i.e., enabling, predisposing and need) and criterion variables involved in service use (Phillips, Morrison, Andersen, & Aday, 1998).

Several articles modified Andersen's (1995) model to fit the contingencies surrounding specific Latino communities. Portes and colleagues (1992) expanded Andersen's model by adding contextual variables unique to the Mariel Cuban and Haitian refugee populations in South Florida, such as context of exit, use of mental health care in country of origin, ties with the ethnic community in the receiving country, and accessibility of services directed toward refugee communities. Ortega and Alegría (2002) also expanded Andersen's model by examining the effects self-reliance (i.e., preferring to solve emotional problems on one's own) had on mental health service use.

Alegría and colleagues (2002) adapted Mckinlay and Marceau's (1999) framework to examine how the interplay between ethnicity and race and social position variables (e.g., income, poverty, residence zone), influenced the use of specialty mental health services of Latinos, African Americans, and non-Latino Whites. The Network Episode Model (NEM), "a dynamic exploratory model of the social process of illness" (Pescosolido, 1991, p. 162) premised on mental health care seeking as embedded in and influenced by social networks and their social context (Pescosolido, Gardner, & Lubell, 1998) was used in one article. Pescosolido et al. (1998) tested the NEM with a subset of the PRMHUS sample who had reported any consultation for a mental health problem in the previous year to study the effects social support variables (e.g., size of social support network, strength of social support) had on their service use.

Dependent Variables

The most common dependent variable across studies was self-reported retrospective measures of service use. Services included in these measures were mental health providers (e.g., psychiatrist, psychologist), general medical providers (e.g., family practitioner, internist), other professional providers (e.g., chiropractor, counselor), and/or informal providers (e.g., folk healer, spiritualist, priest). This dependent variable was commonly operationalized as a categorical variable measuring whether or not individuals used these services and/or which sector of care was utilized over a specified period of time (e.g., past 6-months, past 12-months).

Six articles (Alegría et al., 1991; Hough et al., 1987; Portes et al., 1992; Wells et al., 1987, 1989; Young et al., 2001) defined service use as a continuous variable measuring the frequency of services used over a specified period of time. Hough and colleagues (1987) using data from the ECA Los Angeles site measured the number of times respondents' visited specialty mental health, general health, and other human services in the previous 6-months for problems with emotions, nerves, drugs, alcohol or mental health.

Other dependent variables measured were the use of psychotropic medications and retention in mental health care for a specified period of time (Ortega & Alegría, 2002). Wells and colleagues (2001) measured respondents' satisfaction with mental health care, their perceptions of unmet mental health needs, and delays in receiving care. Young and colleagues (2001) examined the quality of care received for depressive and anxiety disorders by estimating the appropriateness of care received based on current treatment guidelines. Two studies (Pescosolido et al., 1998; Vega et al., 2001) expanded the conceptualization of service use to include the patterns and/or combination of sources of help consulted for a mental health problem in a specified period of time. For example, Pescosolido and colleagues (1998) presented respondents with 10 different sources of care and asked them to choose all of the sources they had used in the previous 12-months to cope with a mental health problem. They then categorized these ten sources of care into six types of health care advisors, (1) friends or relatives, (2) clergy, (3) traditional healers (e.g., *espiritista*), (4) social service or self-help organizations, (5) general medical provider or clinic, and (6) specialty mental health provider or clinic. These six types were used to create cluster algorithms to determine the different combinations of care respondents' used to cope with a mental health problem in the previous year.

Study Findings

This section discusses main findings from the 16 articles. A summary of Latinos service use rates across these articles is presented followed by a discussion of the factors that were associated with Latino adults' mental health service use.

Latino Mental Health Service Use Rates—Articles that compared service use rates of Latinos with non-Latino Whites with similar mental health problems (e.g., psychiatric diagnosis, level of functional impairment) consistently found that Latinos in the U.S. underutilize mental health services (Alegría et al., 2002; Harris et al., 2005; Hough, et al., 1987; Wells et al., 2001). For instance, data from the ECA Los Angeles site showed that Mexican American adults who met criteria for a DIS/DSM-III diagnoses within the prior six months of being interviewed were less likely than their non-Latino White counterparts to visit a mental health specialist (8.4% vs. 16.8%, respectively; Hough et al., 1987). Wells et al. (2001) using data from the RWJF HCS also reported that Latinos had greater delays in receiving mental health care than non-Latino Whites (22.7% vs. 10.7%, respectively) and were less satisfied with the care received from the general health, mental health, and substance abuse systems of care. Moreover, Latinos and African Americans who were categorized as having a probable 12-month psychiatric or substance abuse disorder were less likely than their non-

Latino White counterparts of being in active treatment (22.4%-25% vs. 37.6%, respectively) at the time of the interview. Young et al. (2001) using RWJF HCS data also reported that among individuals with depressive or anxiety disorders, Latinos and African Americans were less likely to receive guideline congruent care than their non-Latino White counterparts (24%-17% vs. 34%, respectively). Lastly, Alegría and colleagues (2002) using NCS data reported that after adjusting for psychiatric needs (e.g., presence of one or more psychiatric diagnosis and one or more days of disability due to mental illness) demographic factors (e.g., age, sex, education), insurance status, geographic location (i.e., Northeast, South, West, Midwest) and zone of residence (rural vs. urban) poor Latinos were significantly less likely than poor non-Latino Whites to use specialty mental health services.

Another pattern of service use observed across articles was that Latinos tended to rely more often on the general medical care sector for mental health care than in the specialty mental health care sector. For example, Vega et al., (2001) reported that among Mexican Americans who had a CIDI/DSM-III-R diagnosis in the past twelve months, 19.9% received services from general medical providers (e.g., family practitioners, internists, general practitioners) while only 9.3% received services from specialty mental health care providers (e.g., psychiatrist, psychologist, social worker, psychiatric nurse). A similar pattern of seeking mental health care in the general medical sector was also reported among Puerto Ricans living in low income areas of Puerto Rico and among a nationally representative sample of Latinos in the U.S. In the PRMHUS, Alegría and colleagues (1991) found that 22% of those in need of mental health services went to non-mental health specialist in the general medical sector compared to 17.9% who visited a mental health specialist. Likewise, Wells et al. (2001) reported that among Latino respondents in the RWJF HCS 28% sought mental health services in primary health while 4.2% used specialty mental health services. This pattern of care suggests that general medical providers are a main source of mental health care for many Latinos and serve as important providers of mental health services and referrals.

To further understand Latino mental health service use, Vega et al. (2001) and Pescosolido et al. (1998) went beyond the documentation of service use rates and reported the combination of sources of care that Mexican Americans from the MAPSS and Puerto Ricans from the PRMHUS used to cope with mental disorders. These two studies provide some unique insights into the patterns of care that these two Latino groups use to seek mental health care.

First, the sole use of a single source of care, particularly mental health specialist and informal providers (e.g., folk healer, spiritualist, psychics), was rare among Mexican Americans. Vega and colleagues (2001) found that among foreign and U.S.-born Mexican Americans in need of mental health care, few sought services only from mental health specialists (1%) and a small proportion (1.2%) use informal providers as their only source of mental health care. They also reported that the use of informal providers was more common among the foreign-born (2%) than the U.S.-born (0.8%). However, these differences were not statistically significant and the use of these providers was low for both groups. These findings suggest that the use of informal providers among individuals of Mexican origin does not displace the use of formal providers and does not seem to contribute to their underutilization of mental health services (Vega et al., 1999).

Second, foreign and U.S.-born Mexican Americans with one or more diagnosable mental disorders tended to co-utilize specialty mental health services primarily with general medical services and secondarily with other professionals, such as chiropractors, priests, ministers, and counselors among others (Vega et al., 2001). Vega and colleagues found that the co-utilization of specialist mental health providers and general medical practitioners was significantly more prevalent among U.S.-born Mexicans (28.5%) than their foreign-born counterparts (14.3%).

These findings highlight the need to futher study and improve the coordination and continuity of care across service sectors for Mexican Americans.

Third, Pescosolido and colleagues (1998) found six unique patterns for seeking mental health care among a subset of respondents (*n*=365) from the PRMHUS who reported any type of consultation for a mental health problem in the previous year. Four of the six patterns included individuals who reported consulting only one source of care, such as a mental health specialist (17.5%), general medical provider (31.5%), clergy (15.3%), and family members and friends (23.6%). The other two patterns incorporated different combinations of sources of care. One pattern included the combination of family members and friends, clergy, and general medical practitioners (7.9%). The other included family members and friends, general practitioners, and mental health specialist (4.1%). Pescosolido and colleagues (1998) also reported that different individual characteristics influenced these patterns of seeking mental health care. For example, those who reported the most serious mental health needs tended to combine the most sources of care including professional (e.g., mental health specialists, general medical providers) and lay (family members, clergy) advisors. Pescosolido et al.'s findings highlight the diversity of sources of care that Puerto Ricans use to cope with mental health problems.

Correlates of Service Use—Table 2 summarizes correlates of service use reported across studies reviewed. All of these correlates were identified through multivariate analyses. Correlates of service use presented below are categorized by the key components of Andersen's (1995) model (i.e., need, predisposing, and enabling factors) since this was the model most commonly used.

Need Factors—Needs factors were consistently found to be associated with the use of both specialty mental health and general medical providers (Albizu-Garcia et al., 2001; Alegría et al., 1991; Peifer et al., 2000; Portes et al., 1992; Wells et al., 1989). Need factors associated with the use of these providers included functional impairment due to mental illness, presence of one or more psychiatric diagnosis, comorbidity, defined either as two or more mental disorders or the combination of a substance abuse and mental disorder, and self-reported measures of poor physical and/or mental health. For instance, Portes et al. (1992) found that the number of DIS/DSM-III diagnoses was positively related to the number of times respondents visited a general medical or mental health provider for a mental health problem in the previous 6-months after adjusting for demographic factors, social network variables, health insurance, and previous service use. Vera et al. (1998) using a multidimensional indicator of mental health needs found that definite mental health need, defined as the presence of one or more psychiatric diagnoses, high levels of functional impairment and distress, and a self-rating of poor physical and mental health, was a strong predictor of formal mental health services use (i.e., specialty mental health and general medical services) in the past year for Puerto Ricans. Consistent with the mental health services literature and service use studies of other populations (e.g. Mechanic, 1979, Phillips et al., 1998), need factors stand out as one of the most consistent predictors of service use for Latinos in the U.S. and Puerto Rico.

Predisposing Factors—A number of predisposing factors were found to impact Latinos' service use. Women were more likely than men to use mental health services (i.e., specialty mental health services or general medical services) in six articles (Ortega & Alegría, 2002; Peifer et al., 2000; Pescosolido, 1998; Portes et al., 1992; Vega et al., 2001; Wells et al., 1989). For example, Vega and colleagues (2001) reported that after controlling for need, enabling and other predisposing factors, Mexican women from the MAPSS were three times more likely to use specialty mental health services and two times more likely to use general medical services than men. However, in the only study that directly examined the effects of gender on mental health service use employing a longitudinal panel design no gender differences were reported for rates of service use among Puerto Ricans' living in the island

(Albizu-Garcia et al., 2001). Yet, an interaction between perceived need and gender was found in this study with men who perceived a mental health need being more likely to use mental health services than women who perceived a mental health need. More work in this area is needed to discern how gender influences service use for mental health problems among Puerto Ricans and other Latino groups and what contributes to these gender differences.

Being unemployed and being single (Albizu-Garcia et al., 2001; Ortega & Alegría, 2002; Peifer et al., 2000; Portes et al., 1992; Vega, et al., 1999; Vera et al., 1998) were each found to be positively related to mental health service use. Higher income and higher educational attainment also predicted mental health service use among a nationally representative sample of Latinos in the U.S. (Alegría et al., 2002), Mexican Americans in Fresno County, California (Peifer et al., 2000; Vega, et al., 1999) and Puerto Ricans living in Puerto Rico (Alegría et al., 1991). Age was also found to influence the use of general medical and specialty mental health services. However, these findings are equivocal since some studies indicated that young Latino adults use more mental health services (Portes et al., 1992; Vera et al., 1998), and other studies reporting that older Latinos use more services (Alegría et al, 1991; Pescosolido et al., 1998; Vega, et al., 1999). Future research in this area is warranted to understand the effects of age on Latinos use of mental health services.

Low acculturation level was also found to be negatively related to mental health service use. U.S.-born Latinos and those who score high on acculturation measures were more likely to use specialty mental health services than their less acculturated or foreign-born counterparts (Vega et al., 1999; Wells et al., 1987). Vega and colleagues (2001) reported that U.S.-born Mexican Americans were significantly more likely to use specialty mental health services than those who were foreign-born (13.4% vs. 4.0, respectively). Foreign-born Mexicans Americans were also found to rely more often on the general medical sector when confronted with mental health problems. Wells et al. (1987) reported that Mexican Americans with a DIS/DSM-III diagnoses in the past six-months were twice as likely to receive care from a general medical practitioner than from a mental health specialist. Cultural interpretation of symptoms, stigma related to mental illness and its treatments, somatization of psychiatric symptoms, and the availability of general medical providers are believed to explain why less acculturated Latinos and immigrants underutilize specialty mental health services and rely more often on the general medical sector for care than more acculturated Latinos (Castillo, Waitzkin, & Escobar, 1994; Escobar, Burnam, Karno, Forsythe, & Golding, 1987; Vega et al., 1998). Future research is needed to clarify what aspects of the acculturation experience influence mental health service use decisions among Latinos and how it interacts with other predisposing, enabling and need factors. The examination of contextual factors implicated in the acculturation experiences (e.g., prior immigration experiences, traumas experienced during immigration, development of new social support networks, knowledge of the health care system, stigma and attitudes toward mental illness, retention of cultural values) can begin to shape our understanding of what aspects of this complex cultural process influences mental health service use (Cabassa, 2003; Rogler et al., 1991).

Lastly, Ortega and Alegría (2002) examined the relationship between self-reliant attitudes, defined as preferring “to solve their emotional problems on their own” (p. 133), and the use of mental health services among Puerto Ricans. They found that those who endorsed self-reliant attitudes were 40% less likely to use mental health services than respondents who did not endorse these attitudes. An interaction between self-reliant attitudes and definite mental health needs was also found. That is, respondents who were classified as having a definite mental health need and endorsed self-reliant attitudes were less likely to use mental health services than those with similar mental health needs who did not endorse self-reliant attitudes. Moreover, Ortega and Alegría (2002) reported that a decrease in self-reliant attitudes from wave I to wave II was related to increases in mental health service use. This study provides

some initial evidence that endorsement of self-reliant attitudes may deter Puerto Ricans from seeking mental health services in times of need. Studies are needed to examine whether these findings can be replicated with other Latino groups.

Enabling Factors—Several enabling factors were associated with Latinos mental health service use. Three articles (Albizu-Garcia et al., 2001; Vega et al., 2001; Wells et al., 1989) out of the ten (Alegría et al., 1991; Alegría et al., 2002; Ortega & Alegría, 2002; Peifer et al., 2000; Portes et al., 1992; Vera et al., 1998; Wells et al., 2001) that included health insurance measures found a positive relationship between having health insurance and using mental health services after controlling for other need, enabling, and predisposing factors. Vega and colleagues (2001) found that among Mexican Americans with one or more CIDI/DSM-III-R diagnoses with private medical insurance were three times more likely to use specialty mental health providers than those who were uninsured. Furthermore, those with either private or public health insurance were two times more likely to use general medical services than their uninsured counterparts. Future studies are needed to better understand the relationship between health insurance and service use among Latinos. These studies can begin to examine how components of health insurance, such as insurance rates, co-payments for mental health services, and type of health insurance plans influence Latinos use of services in the primary health and specialty mental health care sectors.

Other enabling factors associated with service use included previous use of mental health services and knowledge of where to seek mental health treatments. Albizu-Garcia et al. (2001) and Portes et al. (1992) found that a history of previous mental health service use was one of the strongest predictor of future service use among Puerto Ricans and Mariel Cubans. Likewise, Vega and colleagues (2001) found that, among Mexicans Americans those who reported knowing where to obtain mental health treatments were more likely to use specialty mental health services than their counterparts who did not know where to seek care. Ortega and Alegría (2002) also found an inverse relationship between negative availability (e.g., those who reported being uncertain about where to seek help for mental health problems) and the use of mental health services. These findings show the importance that previous experiences with services and the diffusion of information of where to seek care have in influencing the use of mental health services among different Latino groups.

Place of residence was associated with service use. Vega et al. (1999) found that rural residence was positively associated with Mexican Americans receipt of mental health care from the general medical sector, which could be explained by the lack of specialty mental health services in rural areas. Alegría and colleagues (2002) reported that urban residence was positively associated with the use of specialty mental health services, which may be a product of greater availability of these services in urban centers. In addition, economic strain, a self-reported measure of a person's ability to pay for food, rent, and other basic necessities, was negatively associated with the use of mental health services (Vera et al., 1998). This finding suggests that when individuals who suffer from a mental illness feel they can not fulfill basic economic necessities they are less likely to seek specialty mental health services than their counterparts who feel they are able to meet their economic needs.

Lastly, social support factors (e.g., size of social network, strengths of social supports) were also reported to influence mental health service use among Latinos. Although few epidemiological studies have examined the relationship between social support variables and mental health service use in the Latino population, there appears to be an emerging pattern from the findings of studies included in this review. Albizu-Garcia et al. (2001) and Pescosolido et al. (1998) found that among Puerto Ricans having small supportive social networks increased the likelihood of seeking mental health care. That is, large supportive networks may act as a buffer during times of need and delay or replace the need and urgency to use formal mental

health services. More work is needed to better understand how social supportive networks characteristics (e.g., size, quality of support) influence Latinos' use of mental health services.

DISCUSSION

In the U.S., eliminating ethnic and racial disparities in health and mental health care have become a public health priority (IOM, 2003a; USDHHS, 1999, 2003). In order to eliminate these disparities in care, we must first document the extent of disparities, identify and understand factors and processes that cause these inequities in care, and apply this knowledge to develop and implement evidence-based interventions aimed at eliminating these trends in care. Mental health services and policies aimed at achieving this important objective must be informed by research based on the best available evidence.

From the early 1980s to the present, a wave of epidemiological studies documented the unmet mental health needs of Latino communities. This paper provides a systematic review of this wave of studies and represents a road map of what we know about how Latino adults living in the community access mental health services and the factors that are associated with their search for care. Findings from this review enable us to examine where we have traveled and what we have learned along the way. This paper provides evidence that can help us decide in which direction we must turn and how we should embark on the path to eliminate mental health care disparities among Latinos.

Methodological Issues

In order to understand what we know about Latinos' access to mental health services, we need to examine the methods used to produce this evidence. Several methodological issues related to the design, sampling, and measurement were observed across the sixteen articles. First, the majority of studies reviewed were cross-sectional in nature. While this design has some strength, cross-sectional studies prevent us from predicting which factors enable or restrict Latinos in need of care from accessing mental health services. It also makes it difficult to disentangle the social and cultural processes that influence help-seeking behaviors and pathways to services (López, 2002). There is a paucity of longitudinal and prospective access studies in the Latino mental health services literature (López, 2002; Rogler & Cortes, 1993).

Longitudinal studies that follow Latinos from the community as they access mental health services and track their use of services and outcomes can provide a better picture of the predictors and barriers of service use. Although these studies are costly and can incur high attrition rates, they can produce valuable information about the pathways Latinos and their families take to use formal and informal mental health services and how they combine these different sources of care overtime. Studies of pathways to services can also identify gatekeepers to the mental health system of care. Resources can then be allocated to train these gatekeepers to identify those Latinos who are in need of care and then make appropriate referrals. Longitudinal studies can also track how Latino adults move in and out of the mental health system and how they navigate and combine the use of mental health services with other service sectors, such as the general medical, judicial, welfare, housing, and informal (e.g., religious institutions, folk healers) sectors. This information can be used to describe the sectors of care that Latinos use, identify barriers that may prevent them from accessing these sectors, and provide policy makers a framework as to how these different sectors need to work together in order to provide continuity of care.

Furthermore, longitudinal studies can be used to track service use outcomes across systems of care. Service use outcomes must include not only clinical outcomes (e.g., reduction in symptomatology, functional impairment, rehospitalization) but also examine continuity of care, employment histories, educational attainments, housing, and quality of life. In order to

develop effective and high quality mental health services for Latinos, we need a better understanding of which programs and services produce the best outcomes. Lastly, longitudinal studies can begin to examine the social, economic, and emotional consequences that result from the underutilization of mental health services among Latinos. A fundamental question that needs to be addressed is: What are the economic, social, and emotional costs to Latino individuals and families in need of care for underutilizing mental health services and for receiving poor quality mental health care? Understanding the costs that these disparities have to our society can help garner support for more public and private funding to eliminate these inequalities in care (López, 2002).

The second methodological issue relates to studies' sampling strategies. Although the national random samples used in several of the articles reviewed enable generalization of results to the non-institutionalized adult population of the U.S. or Puerto Rico, several limitations in these samples must be noted. For instance, the NCS excluded adults who did not speak English and only sampled individuals between the ages of 15 and 54, excluding children and elders. Conducting interviews only in English created a serious bias in the Latino sample of the NCS since it is estimated that one out of four Latino individuals live in linguistically isolated households and approximately 7.7 million report not speaking English "very well" (IOM, 2003a, Shin & Bruno, 2003). Moreover, the exclusion of Spanish-speaking Latinos may overestimate the service use rates in this population since Spanish-speaking Latinos tend to be those at higher risk for underutilizing mental health services due to low levels of insurance coverage, education, income, and being less acculturated (Vega & Alegría, 2001).

The recently completed National Latino and Asian American Survey (NLAAS) will address this limitation by reporting findings from a nationally representative sample that includes both English and Spanish speaking Latinos. The NLAAS is also designed to compare the mental health service use rates of Latinos and Asians with other national representative samples of non-Latino Whites and African Americans taken from the National Comorbidity Study-Replication and the National Survey of American Life (Alegría et al., 2004). These cross-ethnic and racial comparisons will pave the way for future studies to identify and isolate which disparities in access and quality of care are unique to Latinos, which are common to racial and ethnic minorities, and which are due to socioeconomic factors regardless of race and ethnicity. The evidence from these studies will help clarify how the sociocultural, economic, geographic, and political context influence health and mental health care disparities and shape public policies aimed at eliminating these inequities in care (Williams & Jackson, 2005)

Furthermore, most studies reviewed used samples that either collapsed different Latino groups into one group (e.g., Wells et al., 2001; Young et al., 2001) or examined the service use rates of a single Latino group (e.g., Vega et al., 2001; Vera et al., 1998). Only one study reviewed disaggregated the Latino sample into Mexicans, Central/South Americans, Puerto Ricans and other Latinos and compared their service use (Harris et al., 2005). Given the diversity of the Latino population and the different demographic profiles of these groups, studies that include samples big enough to make within group comparisons are needed. For instance, 11.2 million Latinos lack medical insurance, making them the largest uninsured group in the U.S. (33.4%), followed by Native Americans (27.1%), African Americans (20.8%), Asians (20.8%) and non-Latino Whites (11.6%; Doty, 2003; Mills, 2000). Yet, within Latino groups varying rates of health insurance exist, with Central and South Americans having the highest proportion of uninsured individuals (39%), followed by Mexicans (38%), Cubans (22%), and Puerto Ricans (19%; Schur & Feldman, 2001). Moreover, levels of health insurance within the Latino population also vary by place of birth with foreign-born being more than twice as likely to be uninsured than their U.S.-born counterparts, and recent immigrants are the least likely to have insurance (Schur & Feldman, 2001). These differential insurance rates highlight the important within group differences in the Latino population that may influence access to care.

Most epidemiological studies have focused on the three largest, most represented Latino groups - Mexicans, Puerto Ricans, and Cubans. Yet, in the past decade the growth of Latino immigrants from the Dominican Republic, Colombia, and other Latin American countries have been large but most studies do not include analyses of this group mainly due to their low numerical representation that reduce statistical power. More studies that over sample Latino immigrants from these countries and directly examine within Latino group differences are needed to understand and account for the diversity of the U.S. Latino population.

Third, all of the studies reviewed relied on self-report measures of service use and did not report the reliability and validity of these measures. Wang, Lane, Olfson, Pincus, Wells, and Kessler (2005) argued that "recent studies ... suggest that self-reports of mental health service use overestimate administrative treatment records, especially concerning the number of visits and among respondents with more distressing disorders" (p. 633). In other words, self-report measures of service use are subject to biased recall that distorts the reporting of the actual number of visits respondents made during a specified period of time, particularly among those with the most serious disorders. One way to address this limitation is to combine self-report measures with other sources of service use data (e.g., medical records, insurance claims). This combination of service use data must be done with caution since administrative records are also plagued with limitations (e.g., incomplete or missing information) and are not designed for research purposes. The careful triangulation of self-report measures and reliable administrative data, such as treatment records under prospective payment schemes, can help address these measurement limitations and enable researchers to test the reliability and validity of service use measures.

Fourth, only three articles (Ortega & Alegría, 2002; Wells et al., 2001; Young et al., 2001) examined the type, amount, and quality of mental health care that Latinos received in a specified period of time. We know very little about the quality of treatments provided to Latinos in the current mental health system (López, 2002). An important area of future research is to examine the adequacy of care that Latinos receive in service encounters. Studies in this area can begin by estimating the proportion of Latinos in care that receive guideline congruent care for common mental disorders (e.g., major depression, anxiety disorders) and the factors that influence these trends in care. Qualitative methods, such as in-depth interviews, focus groups, and ethnographic studies, can be used to directly examine Latinos personal experiences in accessing and using mental health services.

What Findings Show: Implications for Policy and Practice

Consistent with past reports and literature reviews, findings from these 16 articles suggest several trends in mental health care for Latino adults. Compared with Non-Latino Whites with similar mental health needs, Latinos underutilize specialty mental health services. Latinos who suffer from common mental disorders (e.g., depression and anxiety disorders) are less likely than non-Latino Whites to receive guideline congruent care. Moreover, Latinos who suffer from a mental disorder in the U.S. and Puerto Rico tend to rely more often on the general medical sector than on specialty mental health services and use a combination of professional and lay advisors to cope with their disorders.

Findings also suggest that a complex interplay of structural, economic, psychiatric, and cultural factors influence Latinos' access to mental health services. These findings indicate that interventions aimed at improving access to mental health services must take a multidimensional approach that target modifiable individual and structural factors. Barriers to care reported in these studies included lack of health insurance, low acculturation, endorsing self-reliant attitudes, not knowing where to seek services, high economic strains, and having large supportive networks. Some of these barriers can be targeted for interventions through policy initiatives, such as increasing health insurance coverage, particularly among low-income

Latino immigrants (USDHHS, 2001). The integration of service modalities, such as providing mental health services within primary health care centers or combining mental health treatments with case management services to help individuals meet their basic economic needs and help them navigate the system of care, have been suggested as possible solutions to reduce barriers to mental health care among Latinos (Miranda, Azocar, Organista, Dwyer, & Areane, 2003).

Other barriers can be targeted through public health campaigns aimed at increasing awareness in the Latino community about the signs and symptoms of common mental disorders, disseminating information about available treatments, and dispelling misconceptions about treatments. These campaigns can use social marketing techniques, such as featuring public figures (e.g., actors or athletes with high social status in the Latino community), and presenting mental health information through public announcements and/or commercials during peak television viewing hours in both mainstream and ethnic media. Another technique effective in disseminating health information to the public and positively influencing individuals' health behaviors is to incorporate health information into the storylines of popular television programs (IOM, 2003b). A similar approach could be developed and adapted for Latinos by incorporating information about common mental illnesses and treatments into storylines of popular television programs, such as *telenovelas* and talk shows.

Policies, services, and interventions aimed at eliminating Latinos' disparities in mental health care must be informed by sound research that not only documents these trends in care but explains why and how these inequities occur. This systematic review of epidemiological access studies is a step toward this goal by providing policy makers, administrators, and service providers a map of the existing evidence and highlighting areas for future research and development needed to improve Latinos' access and quality of mental health care. As the Latino population continues to grow, it is in our nation's best interest to produce a better understanding of the causes of disparities in mental health care and translate this knowledge into practices and policies aimed at creating an equitable system of care for all Americans.

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Table 1

Summary of Epidemiological Access Articles

First author	Study	Sample size	Theoretical model/Framework	Statistical analysis	Mental health need measures
Albizu-Garcia et al. (2001)	PRMHUS[a]	3221	Andersen's Behavioral Model of Health Service Use (ABMHSU)	Logistic regression	-Self-rated mental health -CIDI/DSM-III-R diagnoses -DIS diagnosis for antisocial personality disorder -CES-D -Psychiatric Symptoms and Dysfunction Scale
Alegria et al. (1991)	PRMHUS	1308	None specified (NS)	Analysis of variance	-Psychiatric Symptoms and Dysfunction Scale
Alegria et al. (2002)	NCS[b]	7708, 9% Latinos	Adapted version of Mckinlay and Marceau Framework	Logistic regression	-CIDI/DSM-III-R diagnoses -Number of disability days due to a mental illness in the past 30 days.
Harris et al. (2005)	NSDUH[c]	134,875, 13% Latinos	NS	Logistic regression	-K6 screeners for serious mental illness -CIDI-short form -Self-reported measure of unmet need
Hough et al. (1987)	ECA LA[d]	3125 45% Latinos	NS	Bivariate analyses (chi-squares, *t*-tests)	-DIS/DSM-III diagnoses
Ortega et al. (2002)	PRMHUS	3263	ABMHSU and added a self-reliance variable to the model	Logistic regression	-Self recognition of a mental health problem -Number of chronic physical illness -Presence of physical incapacity -CIDI/DSM-III-R diagnosis -DIS diagnosis for antisocial personality disorder -CES-D -Psychiatric Symptoms and Dysfunction Scale -Indicators of functional impairment due to mental illness
Peifer et al. (2000)	MAPSS[e]	280	NS	Multinomial regression	-CIDI/DSM-III-R Diagnosis -Functional impairment due to mental health symptoms
Pescosolido et al. (1998)	PRMHUS	365	ABMHSU and the Network Episode Model	Logistic and multinomial regression	-Psychiatric Symptoms and Dysfunction Scale
Portes et al. (1992)	South Florida Refugee Study	952 47% Cubans	A modified version of ABMHSU - included contextual factors relevant to refugees populations	Logistic regression Censored Dependent Variable Regression (TOBIT)	-DIS/DSM-III diagnosis
Vega et al. (1999)	MAPSS	508	NS	Logistic regression	-CIDI/DSM-III-R diagnosis
Vega et al. (2001)	MAPSS	507	ABMHSU	Logistic regression	-CIDI/DSM-III-R diagnosis
Vera et al. (1998)	PRMHUS	3435	ABMHSU and stages of help-seeking model	Logistic regression	-Self-rated mental health -CIDI/DSM-III-R diagnoses -DIS diagnosis for antisocial personality disorder -CES-D -Psychiatric Symptoms and Dysfunction Scale -Indicators of functional impairment due mental illness
Wells et al. (1987)	ECA LA	2552, 49% Latinos	NS	Logistic regression	-DIS/DSM-III diagnosis -Indicators of physical and functional status in the past six-months
Wells et al. (1989)	ECA LA	1055	ABMHSU	Logistic regression	-DIS/DSM-III diagnosis -Indicators of physical and functional status in the past six-months
Wells et al. (2001)	RWJF HCS[f]	9585, 6% Latinos	NS	Logistic and linear regression	-CIDI-Short Form/DSM-III-R diagnosis -12-Item Short-Form Health Survey -Alcohol use disorder identification test
Young et al. (2001)	RWJF HCS	1636, 10% Latinos	NS	Logistic regression	-CIDI-Short Form/DSM-III-R diagnosis -12-Item short-form health survey -Alcohol use disorder identification test

First author	Study	Sample size	Theoretical model/Framework	Statistical analysis	Mental health need measures
					-Self-perceived need

[a] Puerto Rico Mental Health Utilization Study.

[b] National Comorbidity Study.

[c] National Surveys on Drug Use and Health.

[d] Epidemiological Catchment Area - Los Angeles Site.

[e] Mexican American Prevalence and Service Survey.

[f] Robert Wood Johnson Foundation's Healthcare for Communities Study.

Table 2

Latinos' Correlates of General Medical and Specialty Mental Health Services Use for Mental Health Problems[a]

Correlates of service use	Studies	Relationship with service use[b]
Need factors		
Impairment/Psychological dysfunction	PRMHUS, MAPSS	+
Psychiatric diagnosis	PRMHUS, MAPSS, NCS, South Florida Refugee Study, ECA-LA	+
Comobidity (i.e., two or more mental disorders or substance abuse disorders)	PRMHUS, MAPSS, NCS	+
Self-rated mental health	PRMHUS, MAPSS	-
Predisposing factors		
Gender (Female)	PRMHUS, MAPSS, South Florida Refugee Study, ECA-LA	+/-
Unemployment	PRMHUS, MAPSS	+
Being Single	PRMHUS, MAPSS, South Florida Refugee Study	+
High SES (education and income)	PRMHUS, MAPSS, NCS	+
Age	PRMHUS, MAPSS, South Florida Refugee Study	+/-
Low acculturation/foreign-born	MAPSS, ECA-LA	-
Self-reliant attitude	PRMHUS	-
Enabling factors		
Health insurance	PRMHUS, MAPSS. ECA-LA	+
Previous use of mental health services	PRMHUS, South Florida Refugee Study	+
Knowledge of where to seek mental health treatments	MAPSS	+
Negative availability	PRMHUS	-
Place of residence (urban/rural)	NCS, MAPSS	+/-
Economic strain	PRMHUS	-
Size of social support network	PRMHUS	-

[a] All correlates were identified through multivariate analyses.

[b] + Positively related to service use, - Negatively related with service use, +/- Equivocal findings, both positive, negative, and/or no relationships were reported.